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IN AMERICA

THE AMERICAN BEE JOURNAL

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Sweet Clover for the South.

We are more than pleased to observe the deep interest awakening in regard to planting to secure a continuous honey flow, and the general favor which the much abused, but very worthy, sweet clover (*Melilotus alba*) is gaining. Mr. J. L. Edwards, of Wadesboro, N. C., in a letter dated Feb. 6, 1882, writes as follows:

I have had poor success with bees, owing to the fact that there are but few honey-producing plants or trees on my plantation, or in my section of the country; but your remarks on sweet clover, in the BEE JOURNAL for Jan. 11, encourages me to give it a trial; I am anxious to raise enough honey for my own family. Now, I wish to know if sweet clover will do well as far South as this—latitude 33°? If it will make good hay and pasture, I will plant it instead of red clover. What kind of land does it grow best on? I have about 50 acres of creek bottom, part sandy loam and a part clay loam; I have also a variety of uplands, sandy, clay and gravelly. Some of my bottoms are too wet for red clover, some are too sandy; all of my uplands are too dry for red clover to stand our long hot summers. Please answer the above questions, and give me all the information you can. I feel deeply interested in sweet clover. Hay is worth \$25.00 a ton with us, and if sweet clover will succeed here, as well as it does in the Northern States, I will go into it quite extensively.

Try the sweet clover on your bottom lands, especially on the sand and clay loams; also on the uplands. It will stand any amount of water, and on gravel soil the tap-root will run down till it finds moisture. Your climate, we think, is well adapted for its growth, as it will withstand any degree of summer heat or winter cold, and its deep-penetrating, wide-spread-

ing roots, admirably adapt it to any variety of soil, whether wet or dry, sand or clay, loam or gravel. Being remarkably thrifty in growth, it will be found equal to red clover for soiling, and can be successfully grown in localities where the latter will prove a failure. Prof. C. E. Thorne, of the Ohio State University, thus testifies regarding its value as a field plant: "It will grow quite luxuriantly in hard, poor clay, where even white clover will scarcely live at all, and grows much more rapidly than red clover in any soil, while in the soils that are, as is said, 'clover-sick,' it thrives as well as anywhere. It is a good forage plant for bees and for cattle, and is well adapted for soiling, as it makes a growth of 4 to 6 feet during the season, and is said to bear 2 or 3 cuttings. A German analysis gives its hay a feeding value of \$15 per ton as against \$16.28 for very good red clover hay. While red clover, upon which our farming in many sections, and especially in clay lands, depends so essentially for crops of grain, is becoming more and more uncertain. It would seem to be worth while to try this 'fast weed' as a resource for recuperative green manuring, in heavy soils especially."

But its greatest recommendation for the general bee-keeper is the fact that it requires no especial cultivation, thus making it especially desirable for roadsides and commons. Being a biennial, the seeds possess great vitality, and may be kept over for a long time, and scattered a handful at a time, as opportunity offers, or a bare place develops itself.

Mr. Vennor says: "We are going to have a very stormy and cold March in western and southwestern sections chiefly." But he has signally failed in his prognostications for December and January, for this locality.

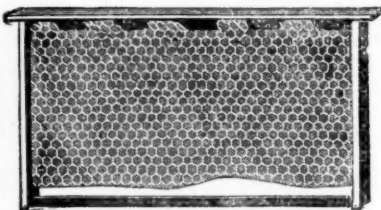
Fastening Foundation in Frames.

Mr. S. F. Miller, of North Manchester, Ind., addressed us for a method of increasing by dividing, which was published in the BEE JOURNAL, together with instructions for doing so successfully. The following letter from him gives the result of his practice:

In the BEE JOURNAL for 1881, page 100, you instructed me how to increase by dividing, in answer to a letter on that subject, and I will now report my success. I had two colonies, one of 6 frames and the other of 7, but I had so little experience I did not know the difference between nuclei and full colonies. First, I had to build the two up to strong colonies, and then I followed your instructions for increasing, and now have 7 colonies in excellent condition. To-day they had an excellent flight, and made everything hum. They have plenty of honey. Now, did I not do well for a beginner? I had only a plug-hat full of bees and 2 queens, to commence with. I must express my gratitude for that editorial instructing me and thousands of others, and which I shall forever deem as the foundation of my success. I suppose I must go ahead this spring and increase on the same plan, as before, only that I must use foundation instead of old combs, as I have none. I do not rightly understand Prof. Cook, in his "Manual," how to fasten foundation in the frames. I have never seen any foundation. I use the standard Langstroth hive. All I know about bees is what I have learned from the BEE JOURNAL. I have a good chance for success. This is a good location for honey, and very few bees. Which do you think the best, the 8, 9 or 10 frame Langstroth? Mr. J. T. Smith, on page 74, thanks Mrs. A. M. Sanders for her recipe for making honey pop-corn balls. Why not publish the recipe for us in the BEE JOURNAL?

If you intend running for increase this season, then adopt the same course you did the last. There are several methods of fastening comb foundation in frames, as follows: If you use flat top-bars, then double over about one-fourth of an inch along the upper edge of the sheet, with a blunt knife press this lapped portion firmly along the under side of the bar, so the sheet will hang from the center. A machine has recently been invented for the purpose of rapidly fastening foundation in frames, where flat top-bars are used, and for firmly fastening thin foundation in the section boxes. Many use wax and rosin melted together, and glue the foundation on. If you use a top-bar with an inset strip (as many do), you can easily press the foundation to the strip, without the use of melted wax and rosin. If a

triangular or V-shaped top-bar be used, then cut four slits at equal distances along one edge of the foundation, one-half an inch deep—this will give five sub-divisions of the edge—now press up the center and two end portions of the edge, and bend down the other two; lay down the sheet on a table, place the frame with the lower



Triangular Top-Bar with Foundation.

sharp edge of the top to the sheet, and press, with the fingers or a blunt knife, the foundation on the top-bar. These flaps will alternate on each side of the top-bar, and the foundation will hang from the center.

We prefer the standard Langstroth hive, holding 10 frames. Sometimes a good queen will nearly occupy 10 frames in brood-rearing, and then they are invaluable in strengthening up the weaker colonies. They are also very desirable, as giving the largest surface for section boxes to be placed on top. Should an especial occasion demand less room, or a necessity arise for contracting the brood chamber in order to drive the bees into the supers, it is an easy matter to lift out a frame or two, and insert a division-board at the side. We think a queen is not so liable to take advantage of a slight cessation in the honey flow, and cease laying, where there are ten frames and the consequent more or less honey around the edges, as where there are fewer frames. We are aware there are several practical bee-keepers who differ with us regarding the style of hive, as well as the number of frames; but our correspondent asks which we think the best.

The recipe for making honey pop-corn balls, to which reference is made, was published in the BEE JOURNAL of Jan. 4, on page 12.

Syrian Bees.—Please say through BEE JOURNAL who is a reliable person to procure a colony of pure Syrian bees from.

L. G. HALLEY.

New Hamburg, Canada, Feb. 10, '82.

By consulting our advertising columns you will see who have bees for sale. We think they are all reliable persons.

Mild Winter in Europe.

Not only has the present winter been an unusually mild and pleasant one in most portions of the United States, but in Europe they have been similarly blessed. The following letter from Mr. J. D. Hutchison, Glasgow, Scotland, breathes of encouragement:

As proof of the mild weather which we have enjoyed in this country during the winter, I may mention that a gentleman in Dundee, on looking over his apiary a few days ago, found that 5 of his colonies had a large amount of brood in all stages. He was fortunate in procuring a colony of hybrids about 3 years ago, which were then distributed through most of his other hives, and have much improved the working power of the bees. In 1880 this hybrid colony gave 3 swarms, and from the 4 he had over 150 lbs. of fine comb honey, besides leaving his bees sufficient winter stores.

The flowers which have been grown here in the open air are beginning to bud, and in some places full-blown flowers can be had. Butterflies, etc., have been seen several times of late.

The Caledonian Apian Society has had no meeting yet this year, but I expect one will be held at an early date to make arrangements for the annual exhibition, which takes place in Glasgow next July, and which I think will be the largest held as yet.

By the above, it will be seen that 150 pounds of fine comb honey, from four colonies, is regarded as an extraordinary yield, and to be accomplished only by bees which have been much improved. We have published several reports, the past season, where whole apiaries in America have given nearly double that amount as an average for each colony, and there are instances on record where triple that amount have been realized from a single colony in one season; and when bee-keepers have fully realized the importance and profitableness of planting bee pastures (which all eventually will), the fabulous *one thousand pounds per colony* may be among the triumphs frequently realized.

The above letter however suggests, or rather, sustains, one most important fact: that, with improved bees, the honey yield is not commensurate with their home demand, except at such exorbitant prices as to make it an extravagant luxury. Those who have bewailed the intelligence disseminated throughout Europe by the BEE JOURNAL and American apicultural books, can learn an important lesson from the letter, and rejoice with the more intelligent that we are rapidly and surely developing an insatiable and remunerative foreign market.

Foul Brood; Its Origin, Development and Cure.—We have received from A. R. Kohnke, Youngstown, O., a copy of his pamphlet bearing the above title. In his preface the author says:

"I have ventured to offer the bee-keeping public a concise method, delineated in these pages, by which they will be enabled successfully to combat this dreadful malady. I have drawn on the experience and experiments of the most noted scientists and apiarists of Germany, such as Professors Kolbe, Cech, Fisher, Preuss and Lamprecht, but especially Hilbert and Schoenfeld, to whom the bee-keeping fraternity of the whole world is indebted for their efforts and final success in curing foul brood, and to whom I offer my sincerest thanks." Price, 25 cents.

Goodrich's Foundation Fastener.—Mr. S. Goodrich, of Urbana, Ill., has recently invented a very ingenious contrivance for fastening foundation securely and rapidly in frames with flat top-bars, and in sections. He has deposited one in the BEE JOURNAL Museum, and explained the manner of using. We will give, next week, a full description of the machine, with a cut, which cannot be engraved in time for this issue.

L'Abbe L. DuBois, President of "the Society d'Apiculture de la Somme," writes: "The AMERICAN BEE JOURNAL grows better and better every year. It is the first of all French and foreign periodicals that I know of. If I had to choose between them all, I should without hesitancy choose the AMERICAN BEE JOURNAL." This is high endorsement, for L'Abbe L. DuBois is one of the most learned and progressive apiculturists in the World.

An error occurred last week on page 105, 2d column, 3d paragraph, in Mr. Heddon's article. For "honey" substitute the word *hay*. We republish the paragraph properly corrected:

Whether just or not, it is exceedingly handy to cut down the merits of others' successes by saying: "grand location," and excuse the failures of your "ringed, striped and speckled" bees by charging it all up to a large *hay* crop. Upon this very subject, hangs much of our future success or failure.

The semi-annual meeting of the Tuscarawas and Muskingum Valley Bee-Keepers' Convention, will be held in the Town Hall at Coshocton, O., on April 19 and 20, commencing at 10 a. m. A cordial invitation is extended to bee-keepers everywhere.

J. A. BUCKLEW, Sec., Clarks, O.



MISCELLANEOUS.

Introduction of Bees Into America.

—Mr. J. M. Hicks, in the *Grange Bulletin*, remarks as follows on the subject:

As near as we can learn, bees were introduced into this country in the latter part of the 15th century, by the Puritan fathers. I have often heard my grandfather, Dempsey Hicks, say that his father, James Hicks, who came from England, brought bees with him when he emigrated to this country, then a perfect wilderness, and there were no bees to be found in any part of the country. He also said, that the red men of this country often told him there were no bees to be found in the forest previous to the coming of the pale-faces (meaning the white men).

Encouraging Outlook.—Mrs. L. Harrison, in the *Prairie Farmer*, remarks as follows on the honey prospect:

The last two honey seasons have been partial failures in most localities, and this, together with the unprecedented losses in bees during the winter of 1880-81, has thinned out the ranks of bee-keepers. The faint-hearted fled in disgust, throwing their hives and fixtures to the moles and bats, and crying "humbug" at the top of their voices. The brave buried the dead, and gathered up the remnant of the lost nation and encouraged the mothers in the production of young, furnishing candy for the babies, flour, honey, and "coffee A." Under the fostering care of their owner, each mother did her best, and sent off colonies to occupy the deserted homes of their unfortunate predecessors, until the bee village was again populous. The rearing of so many bees consumed large quantities of honey, consequently little surplus was left, therefore the honey product of 1882 will find very little old honey in the market to come in competition with it.

This winter, so far, has been favorable for bees on their summer stands. January 26th was rainy, but a little past noon the clouds broke away, and the sun shone, the thermometer indicating 64° in the shade. Out rushed the bees from their hives, like pent-up school children at recess, and a merry sport they had. They cleaned house, but carried out few dead; every colony was living and in fine condition.

The skies are brightening for bee-keepers, and the outlook is favorable. Honey will no longer go begging for a market, as the demand for it is constantly increasing. The large crop of 1879, and consequently low price, caused it to be introduced into many

families where it had previously been a stranger. Many persons who had formerly been of the opinion that honey disagreed with them, and always made them sick, were tempted, by its low price and beautiful appearance, to partake of it, and were agreeably surprised that no sickness followed the indulgence. They found out that the honey of to-day, produced by scientific bee-culture, is very different from the black mixture of bee-bread, old comb, and honey, formerly offered in the markets.

Local Convention Directory.

1882. *Time and Place of Meeting.*

March 15—New Jersey State, New Brunswick, N. J.

April 11—Eastern Michigan, at Detroit, Mich.
A. B. Weed, Sec., Detroit, Mich.

19, 20—Tuscarawas and Muskingum Valley, at Coshocton, O.
J. A. Bucklew, Sec., Clarks, O.

25—Texas State, at McKinney, Texas.
Wm. R. Howard, Sec.

26, 27—Western Michigan, at Grand Rapids.
Wm. M. S. Dodge, Sec., Coopersville, Mich.

27—Kentucky Union, at Eminence, Ky.
G. W. Demaree, Sec., Christiansburg, Ky.

May — Champlain Valley, at Bristol, Vt.
T. Brookins, Sec.

16—N. W. Ill. and S. W. Wis., at Rock City, Ill.
Jonathan Stewart, Sec., Rock City, Ill.

25—Iowa Central, at Winterset, Iowa.
Henry Wallace, Sec.

In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

Catalogues.—We have received new catalogues and price lists from the following persons:

J. H. Robertson, Pewamo, Mich.
L. E. Welch, Linden, Mich.
W. S. Cauthen, Pleasant Hill, S. C.
G. B. Lewis, Watertown, Wis.
Wm. Ballantine & Son, Sago, O.
C. G. Dickinson, South Oxford, N. Y.
W. C. R. Kemp, Orleans, Ind.
S. D. McLean, Columbia, Tenn.

The Union Bee-Keepers' Association will meet at Eminence, Ky., on the 27th day of April, 1882. A full attendance is very much desired, as important business will be transacted.

G. W. DEMAREE, Sec.
Christiansburg, Ky.

To any one sending two new Weekly subscribers for a year, we will present a volume of the BEE JOURNAL for 1880, bound in paper covers. It contains much valuable information, and it will pay any one who does not already possess it, to obtain a copy. Many of our new subscribers will be pleased to learn that they can get it for \$1.00, by sending for it at once, before they are all gone.

Binders cannot be sent to Canada by mail—the International law will not permit anything but samples of merchandise weighing less than 8 oz.



Nebraska State Convention.

The third annual session of the Nebraska State Bee-Keepers' Association, was called to order by the President, Mr. T. L. Vondorn, at Ashland, on Jan. 12, 1882. The minutes of the previous meeting were read and approved.

The Treasurer presented his report, showing the total receipts to be \$20.25 and expenditures \$11.25, leaving a balance of \$9.00 in the treasury. It was accepted and placed on file.

The committee on constitution and by-laws failed to report, owing to the illness of one of the members. A new committee was appointed, consisting of Messrs. Myers, Culbertson and Hildebrandt. Vice Presidents and others from the different counties in the State, reported as follows:

Prof. Culbertson, for Lancaster County, reported but a small flow of honey in the middle and southern parts, owing to severe drouths, while in the northern, the yield was much larger, and a greater increase of bees. By request, he gave his last year's experiments in wintering, both out-door and cellar. Those out-doors were placed close together, protected by a shed on the north, and covered with several feet of hay. A cloth was put over the frames, and the story filled with dry cobs. He lost 5 of the 6 treated in this way. He put 21 in the cellar, putting several thicknesses of cotton cloth over the frames, and a paper on top of these, on which he put unslacked lime to absorb all moisture. The back end of the hive was raised higher than the front, that all water might run out. He lost 5 of these.

Mr. Decker, of Wahoo, reported large yields of honey and great increase of bees.

P. P. Hayes started with 1 colony, increased to 5, and obtained 400 lbs. of honey.

Mr. Dodder, of same place, increased from 15 to 60.

Mr. Vondorn, of Omaha, gave report for Douglas, who started with 14 colonies, increased to 41, and got 1,900 lbs. of honey.

Mr. Yager increased from 1 to 8.

J. F. Sawyer from 22 to 60.

Mr. Edwards from 92 to 204, and received 2,000 lbs. of honey; the location was overstocked.

The Secretary gave reports received from Gage, Jefferson, Butler, Hall, and others, which indicated a large yield of honey, and almost unprecedented increase of colonies.

It was moved that a question box be opened, in which any one could put questions they wished discussed. Messrs. Culbertson, Rouse and Trester were appointed a committee to answer the questions.

On motion, Messrs. B. E. Kennedy, of Omaha, and D. H. Wheeler, of Plattsmouth, were made honorary members.

The Secretary was instructed to notify members to pay delinquent dues, or their names would be dropped. Adjourned to meet at 7 p. m.

The evening session was opened by the reading of the President's address. Messrs. Culbertson, Caldwell and Trester were appointed a committee to report upon this.

The first question selected from the question box was: "How to Winter Bees Successfully."

Prof. Culbertson opened the discussion. He would remove some of the combs, and spread the others, so the bees would have a chance to cluster in large bodies; would make holes through the combs, so they could pass from one to the other without being chilled. These, with thorough ventilation, dryness, and an even temperature of from 40 to 45 degrees, he considered the requisites. These conditions he thought more easily attained, taken one year with another, by means of a cellar especially prepared for that purpose. In regard to what he considered the requisites, nearly all agreed with him, yet the methods used to obtain them, were nearly as many as there were persons present.

Mr. Rouse wished his bees to be in a healthy condition, and to keep breeding until Oct. 10, if possible. Yet the young bee should have a flight to bear long confinement. He puts the bees on as few combs as they will cover, by putting in a chaff division board; puts a box with a cloth bottom filled with chaff on top; this gives thorough ventilation. He then packed hay around his hives, covering them up entirely, leaving no place for the bees to get out. He had colonies come through all right, with top ventilation, when the entrance was filled with ice. Others have the same experience.

Mr. Caldwell thought what would do one year would not another. He considered a good cellar the best place to winter in, but a poor one the worst place. He put husk mats on top of his frames, and chaff over that, and tried to obtain as nearly an even temperature as possible.

Mr. Vondorn crowds his bees on as few combs as they will cover, spreading these that they may cluster. Packs with chaff, and puts woolen cloths over the top; thinks it not necessary to have all young bees late in the fall to winter successfully. He thought the Langstroth frame as good as any for wintering.

Mr. Hawley had wintered his successfully in a cellar, and preferred that way.

The committee on revision of the constitution and by-laws made their report, which was adopted as read.

In the morning session, the election of officers resulted in the re-election of the old officers.

A paper, by Mr. Vondorn, on practical bee-culture, was read.

From the question box, the subject of "the best honey plants," was discussed.

Mr. Myer preferred rape to all others he had tried. He had 4 acres, and while in bloom, the bees worked on it both late and early, and during

all kinds of weather. They would not work on buckwheat that was in bloom at the same time. Buckwheat was not recommended as worthy of cultivation. Sweet clover and matrimony vine were recommended to sow in all waste places. The President had applied to the department of agriculture for melilot and white clover seed, also motherwort seed to distribute among the Nebraska bee-keepers.

Mrs. Thomas recommended motherwort as one of the best. It was conceded that the most of our honey was gathered from heartsease and goldenrod; some thought sunflower secreted honey, but most thought not. Wild cucumber was spoken of highly.

The subject of "feeding bees" was discussed. The question was asked, why bees fed late in the fall do not breed as fast as when fed in the spring?

Mr. Vondorn said that cold nights were the cause, and also that bees seem to understand that it is the last of the season. He feeds a syrup, made by boiling $2\frac{1}{2}$ lbs. of best sugar in 2 lbs. of water. The use of glucose for feeding was discouraged.

The next question was, "of what importance to the apiarist is selection in queen rearing?"

Mr. Ashland thought as much depended upon the selection of queens from which to rear our colonies, as with any other stock.

Mr. Vondorn thought more attention should be given to the rearing of choice drones, and to accomplish the desired purpose, we would have to establish our queen-rearing apiary several miles from any other colonies. He thought choice queens could not be reared for less than \$3 each.

Queen cells should not be allowed to become chilled, as it is apt to make the wings defective.

In hatching 20 in a queen nursery, he found their wings and bodies defective. Upon examination with a strong microscope, he found them infested with small worms. The Cyprians were not so gentle and easy to manage as the Italians, but equally as good honey gatherers and for increase.

Read before the N. E. Convention.

Prevention of Swarming.

L. C. ROOT.

I am asked by the Executive Committee of this Association to give my experience as to the most successful method of preventing swarming. Much has been written and said upon this subject by many bee-keepers of the day, yet a successful method of controlling the desire to swarm in all cases has not yet been given us. It is therefore one of the hidden mysteries of bee-keeping upon which more light must be shed. As this can only be accomplished by continued study and the adding of our mites to the general fund, I will offer a few facts as they have been developed by a somewhat extended experience. In considering this question we must keep it closely by the side of the thought of our de-

sire to keep our bees fully and constantly at work. It will be generally acknowledged that bees seldom swarm unless honey is being gathered to some extent.

The great question is: how can we keep our bees all at work storing surplus honey without the interruptions occasioned by the desire to swarm and its results. Let it be borne in mind that the conditions which hinder our bees from storing the greatest amount of surplus honey are the same as will create the desire to swarm. We have been told that the size of the hive has little to do with this desire. In contradiction to this I wish to say that, in my experience, it has much to do with it. When you pass through an apiary, during a flow of honey, and see from one to eight quarts of bees lying upon the hives, it indicates not only that the conditions are such as to induce swarms, but also that the bees are not as fully occupied in gathering honey as they should and might be if proper precautions were observed.

Let us notice some of the conditions necessary. I shall indicate as the first requisite a good prolific queen; second, sufficient room for the queen to deposit eggs; third, plenty of room for the bees to store honey; fourth, suitable ventilation; fifth, the proper shading of hives.

While I do not assert that in anything bees never deviate from the general rule, I have ample reason for believing that if the rules I lay down are observed, fair success may be obtained. While my conclusions here reached are based largely upon experience of past years, they are more largely the result of that of the past season, during which time we have had more than ordinary opportunities for observation. It is generally known that our yield of honey for 1881 was very large. In fact, I believe that our yield from one apiary of 40 colonies, of a little over 243 lbs. average per colony, is the largest yield from an entire apiary of the size, ever obtained. I speak of this to mark the fact that this was an apiary where the colonies were the most populous of any I had ever known, and yet we had not the slightest trouble in preventing swarming where the requirements named were supplied.

I may be asked what the first mentioned essential of a good prolific queen has to do with the desire to swarm. I shall not be questioned as to the desirability of such a queen, in other respects. My answer is: that when other conditions have been complied with, our troubles with swarming have been with such colonies as have contained queens that the bees desired to supersede. When the queen cells were sufficiently advanced, such old queens would leave the hive with the swarm, or they would be destroyed and the first young queen hatched would lead the swarm. It should be remembered that our surplus honey, the past season, was nearly all taken with the extractor.

Our second and third points of furnishing sufficient room for both queen and bees to be fully occupied may easily be attained, when the combs

are extracted and interchanged, as may readily be done; but when box honey is desired, more difficulties arise. We may, by the most approved methods, add boxes which will afford sufficient room to store all the honey the bees would gather, but we find that the combs in the brood-nest must be kept so thoroughly occupied with brood and honey to induce the bees to work freely in the boxes, that often the desire to swarm is produced.

The fourth and fifth requisites, which are in the direction of preventing the hive from becoming overheated are very important. In a hive which is very populous, the necessary labor performed creates a great amount of heat. If the weather is very warm, and the hives are sheltered from such breeze as might be afforded, work will be almost entirely discontinued. This is one of the greatest reasons why bees on high ground, where there is a better circulation of air, and where it is generally cooler, gather most honey, other things being equal.

Our home apiary is in a very warm location. During the past season, as the colonies became populous and the weather warm, I noticed the bees lying out upon the front of several hives. I sent an assistant to draw the slide in the bottom board which closed an opening 5x10 inches. The next day in passing through the yard, I observed the bees all busily at work except in two hives. Upon examination, I found these two had been missed, and the ventilators were yet closed.

My conclusions, then, are that in securing extracted honey, with proper management, swarming may in most instances be easily controlled; but when box honey is produced, it is much more difficult. Surplus boxes filled with starters of choicest comb-foundation, with free and immediate access, may be supplied as soon as the bees will occupy them. It is very important that this be not delayed until the bees have already the disposition to swarm. Proper ventilation and shade may be given; and combs of brood may be taken from the brood-chamber, and empty ones supplied. Yet during some seasons, and with some colonines, it will fail to prevent swarming. If we continue to investigate and unite our experiences, we shall yet attain the desired end.

☞ The Texas State Bee-Keepers' Convention will hold its meeting at Judge W. H. Andrews' Apiary, at McKinney, Texas, April 25, 1882.
WM. R. HOWARD, Sec.

☞ A meeting of the bee-keepers of New Jersey will be held at Hall No. 25, Albany street, New Brunswick, N. J., March 15, 1882, at 10 a. m., to organize a State Bee-Keepers' Association. All interested are cordially invited. G. W. Thompson, Stelton; C. H. Rue, Manalapan; J. H. M. Cook, Caldwell, Committee on Call.

☞ The Texas State Bee-Keepers' Convention will be held at McKinney, Texas, on Tuesday, April 25, 1882.



For the American Bee Journal.

The New Races of Bees.

S. VALENTINE.

Bees are wintering well here, both out and in-doors. I have some on their summer stands and some in my cellar. I have just been down in the cellar where I have some 80-odd colonies, and they are all quiet and I think in good condition, except three, which are a little "fussy." The one that has the most "growling" about it is the colony that had my imported Syrian queen in. It is a strong colony, and there are a great many old Syrian bees in it; they are old, for I sent Mr. Root my imported queen last August.

As I have not reported on the Syrian bees for 1881, I will do so now. A year ago I wintered some six or eight Syrian queens. Early in the spring they were slower in breeding up than my albinos, but about the time clover began to bloom, they went to brood-rearing in earnest, and by the last of June they had so many bees I thought they hardly knew where to get lodging, and as I had some frames of honey, thought I would help them out of the trouble. I made some nuclei, and it insulted them so much that they would not receive a queen nor queen-cell, and a whole lot of workers went to laying at a wholesale rate, until they would pile twenty-odd eggs in one cell, and they continued to carry on this kind of work, until I called in a regiment of albinos and cleaned up things. I will give the facts on both sides as I observed them, and all can compare and decide for themselves.

The Syrian bees are not as large as the albinos or Italians, but are very active, and I think they guard the entrance better in cool weather. They fly swifter and light at the entrance and pass in quickly, but they do not carry as heavy loads of honey as the albinos or Italians, which adds to their quickness. The queens are very prolific and the workers not so apt to fill the brood-chamber with honey and crowd out the queen as the Italians and albinos, but the queens are more apt to lay in the sections. The workers are irritable, but if properly managed, can be handled on the comb without much trouble; but they desire to see what is going on and want to be right on or under your fingers, and if one gets pinched a little, is quick to give the signal and in a moment a thousand are running to see what is the matter; they laugh at a little smoke, until they shake all over. When you wish to shake or brush them off the combs, then comes the fun; they generally go in the air and then you find out you are dealing with Holy Land bees. I can take the sections from 5 or 6 strong albino colonies with as little bother, and in the same time, that I can take them from

one strong Syrian colony. The Syrians did not equal the albinos in surplus honey.

When Syrian colonies are made queenless they build a great many cells, but generally destroy a goodly number of them before the queens emerge. When I sent Mr. Root my imported queen, her colony was very strong and I divided it, and I had concluded not to rear any more Syrian queens, but just then I received a letter from a customer at Fort Scott, Kansas, saying he would likely need a lot of Holy Land queens this fall and I let the divided colony (which was very strong, but queenless) build up 44 queen-cells, and after they were capped over they destroyed all but 8 or 9, which produced queens. They are also more difficult to introduce queens in.

I have therefore concluded to drop the Syrians. I have but two queens at present, which are mated with albino drones. I shall keep these for further experimenting, but will not rear any more for sale, unless they develop more favorably, hereafter.

I am preparing to run at least 150 colonies for honey the coming season, of which a large majority will be albinos. I prefer them to any I have yet seen. There will be a rush for early queens, the coming season; the orders that I have booked ahead will require over 100 nuclei.

Double Pipe Creek, Md.

For the American Bee Journal.

The Best Bees Controversy.

JAMES HEDDON.

In reply to my article in the BEE JOURNAL, Mr. Briggs made a man of straw and then knocked him down, to his evident satisfaction. When we cannot answer what our opponent says, we should not put words and ideas up to answer that he did not say. Mr. Briggs' way of getting at my meaning is not only quite ingenious, and favorable for a reply, but about like the little boy whose mother told him "never to despise a man because he wore a ragged coat." This little boy being obedient, commenced at once to despise all men who wore coats that were not ragged. It would seem impossible for anyone to misunderstand my meaning as Mr. Briggs seems to have done.

Many of our largest honey producers eschew the idea of purity of any special race of bees as a point in successful honey-producing, and many of those of less experience are foolish enough to think these men are as wise as those whose honey has never been seen in the markets, and if one of these men should order a queen from some equally foolish breeder, asking for one "tested for qualities and not color," there would likely be no questions arising afterward in regard to the "rings of purity."

A friend of mine (in whose words I have confidence), who has swapped "rings of purity" for bees that are producing immense yields of surplus comb honey, writes me that during

the past season he has taken 700 lbs. of surplus comb honey from one colony and its three swarms, and they are not three-banded bees at all; neither are they pure anythings; they are simply a strain that he has produced out of the best Italians and Germans that he could get. He says they work on red clover immensely. He has 75 colonies that doubled, and averaged over 200 lbs. per colony, and are 15 lbs. each too heavy now. One noteworthy difference between his bees and the "pure three-banded," is that he has no queens for sale, and does not wish his name given; he is not a queen vender, but a home breeder and honey producer.

Does Mr. Briggs really think that it is more difficult to test bees for bands than for business? If so, why not quit testing for bands, for all you can claim is that they indicate certain business qualities, and test for the qualities direct? Does he imagine that a honey producer will complain of the number of bands upon a queen or her progeny, if they fill the bill of his expectations for qualities. Every queen that I call "tested" will have to pass through a different crucible and a far greater period of time, than those of the prize test. By a tested queen, I mean one proven to be normal and healthy, and lays eggs that hatch out bees that (no matter where, how or what they work upon) store large amounts of honey, build comb readily and behave peaceably. A queen that does that is tested to my entire satisfaction, and if she produces bees having no bands or four, as large as kittens or as small as yellow jackets, or is herself dark or light, large or small, normally or excessively prolific, she is of value to me; and what I prize for myself, I prize for others, and *vice versa*. I could test queens for bands with less than one-fourth the labor and time that I can for the qualities named above.

My experience is that large workers are usually found keeping company with the test qualities above named, but quite often small queens. There are other minor points of preference; but if we add them to our test qualifications too soon, they may get in the way of the more vital ones mentioned. I deem such a course poor policy.

I think, just what Mr. Briggs and I believe in regard to breeding, is pretty well understood. We do not differ in regard to what we want, but only in the method of obtaining it. We both want a better bee. Neither of us are old fogey enough to say, "we have reached perfection." Mr. B. puts great stress on the 3 bands that we have had for hundreds of years. "Keep them pure, as they were," seems to me to be the idea, in fact.

I believe the German bee has some very excellent qualities that the Italians do not possess; I want these qualities to become a part and parcel of "the coming bee," and for 5 years I have advocated working for it. The main difference in opinion is, I want two races (and may be, by-and-by, more) and months and years of time to test them, while Mr. Briggs wants the three-banded race exclusively

and a few weeks of time, if I understand him correctly.

If a general outpouring of opinions upon this subject now under discussion could be had, I think that Mr. Briggs would be astonished. I have had private letters from many of our oldest queen breeders upon this subject, and every one of them substantially agrees with me. Thousands of the inexperienced, believe that this system is the only correct one.

Nothing will ever conclusively settle this problem except years of experience of those who are trying to support themselves and their families by means of the cash realized from surplus honey.

Dowagiac, Mich.

For the American Bee Journal.

How to Use the Apiary Register.

E. A. THOMAS.

The Editor of the BEE JOURNAL has done it! He has gotten up a neat well bound Register, well adapted to the wants of all apiarists, and I believe it will pay every one who has a dozen colonies or more to send and get one. By its use you can improve your bees, developing their most valuable qualities and thus increase the products of your apiary. We all wish to secure the largest amount of surplus honey from our apiaries, this being the chief end of bee-culture now, therefore, any means that will tend to increase the surplus crop, either directly or indirectly, should be embraced by all progressive bee-keepers. A careful and correct use of the Register cannot fail to redound to your ultimate success.

Some one way back in the corner may say that it "don't pay," or, "it is too much trouble." The first objection I have already answered; in regard to the second I will say that after learning to keep the Register properly it takes but very little time, it being in convenient form for carrying in the pocket while at work in the apiary.

Perhaps a few hints about keeping a correct Apiary Register may be timely here, and assist many in filling up the blanks in their books.

The headings are all plain and easy to understand until we come to the characteristics. Perhaps if I tell you how I mark my own queens, you will better understand how to use this part of the Register, so important in breeding valuable strains of bees and in developing any particular quality which you desire your bees to possess.

1. Industry. I have kept a record of the industry of my colonies for years, and my success is due in part to this fact. At intervals during the early part of the season before the honey harvest opens, I note the exact condition of every colony under the head of Remarks. I have found that about as sure a way to test the industry of a colony is to note how they work on the first pollen in spring; if they are found indolent at that time they will not prove very valuable as honey gatherers. At the close of the

season I proceed to mark each colony, taking into consideration the amount of honey they have stored, making proper allowance if extracted; their condition at the opening of the honey season and at its close; the vigor with which they work on the early pollen in spring; the weight of the colony in the fall. In the case of a young swarm I estimate the weight of the swarm when hived, and proceed as before.

After a careful consideration of all these points, I mark all the colonies that have given the best results at 75; those next the best at 70 and so on down; 100 is supposed to be a standard to be sought for but not yet attained. I rear my queens from those which stand the highest, and allow no colony to rear any drones that is marked below 75. I change the queens of all colonies marked below 50, at once. The next season, if I find any colony that beats the best record of the previous year I mark them 80, and so on up. After raising the standard of the best to 85, I raise that of the poorest to 60; that is, I change the queens of all those that are marked below 60. By this method of culling the best for breeding purposes and destroying the poorest queens, I have improved my bees to that extent that, at the "annual marking" last fall the best stood at 95 and the lowest at 75. I am cognizant of the fact that, without the aid of an Apiary Register I never could have obtained such satisfactory results in breeding, which have exceeded my most sanguine expectations.

2. Docility. The next space in order is headed Docility. Although secondary to some others, this is a valuable trait in a good strain of bees, and it is well to develop it as much as possible without interfering with other and more important qualities. No one will probably have any trouble in filling up this space, but I would suggest that, in deciding on the relative docility of colonies, they be manipulated on the same day and at the same time of day, using an even quantity of smoke and equal care. Any deviation from this rule will result in an inaccurate marking, as the atmospheric changes exert a great influence on the temper of the bees.

3. Hardiness. This is one of the most important qualities which an improved strain of bees can possess, and I earnestly recommend a careful consideration of this point. I apprehend that the solution of the wintering problem depends in a measure on breeding hardy bees; I speak from experience, having lost only two colonies during the last ten years, a result which is attributable as much to my bees being of a strong, hardy race, as to any improved methods of wintering. In marking the hardiness of colonies, great care and judgment is required. I always take into consideration their exact condition in fall; their condition when taken from their winter-quarters; how they stand the first cold winds of spring, etc. As hardiness must have an indirect influence on the amount of honey which the bees will store, I presume the colonies giving the best results to be the most hardy as well as industrious, all other things

being equal. Any argument in regard to this point will be out of the limits of this article, but if my meaning is not sufficiently plain, I shall be pleased to make it more clear at some future time.

4. Prolificness. In filling up this space I give particular attention to the strength of the colony. It is not always the strongest colonies in spring that contain the most prolific queens. A colony, although strong in the fall, may become depopulated from some cause or causes entirely beyond the control of the apiarist; therefore, a small colony in spring is not a sure indication of an unprolific queen. It seems to me the only correct way to mark them is to consider the amount of brood in proportion to the strength of each colony.

5. Color. I select the largest, best shaped queens, having an abdomen all yellow, and that produces the largest, finest and most uniformly marked bees as a standard, and compare all others to her. In this way I can mark every queen very accurately.

In conclusion, I wish to again call your attention to the value, aye, the necessity of an Apiary Register in breeding an improved strain of bees. If bee-keepers in general will get a Register, and keep a careful and concise record of every queen and colony. It will not be long before our American Italians will have a World-wide reputation. It may not be improper for me to say here, that I have already had several calls for queens, from Scotland, Germany and other parts of Europe, to be shipped during the coming summer. I have kept a Register similar to the one Mr. Newman has just gotten up, for a great many years, and I believe my success in breeding the present princely strain of Italians is due in a great measure to this fact. Coleraine, Mass.

For the American Bee Journal.

Foundation for Surplus.

C. C. MILLER.

Instead of using small starters I practice filling the sections full of foundation. This makes me anxious to find and use that which is the very best for the purpose, and I am glad of any light I can get on the subject. I am inclined to believe that unnecessary ado has been made about the "fish-bone" and that in many cases more of a "fish-bone" than many suppose, can be found in the natural comb. Still, I think the utmost care should be taken to leave no room for objection, and our combs should equal as nearly as may be, or, if possible, excel the natural comb.

So rapid are the changes and improvements in foundation that it is difficult for anyone to keep track of them all. As yet I have only tried the Root, Dunham and Van Deusen, and can only give my experience for what it is worth. This season I shall try the Vandervort and Given. The flat bottomed or Van Deusen I do not like so well as the others, and although some think the Dunham is not suit-

able for surplus, I had a lot of 70 lbs. that pleased me well. It ran less than 6 feet to the pound, but the base or septum was very thin. Some Root foundation running 10 feet to the pound was nice, but was made in narrow pieces, was crooked, and did not cut to advantage.

In the present unsettled state of affairs I do not know that it is possible, but for those who use foundation by the 100 pounds it is certainly desirable that there should be some settled understanding as to what constitutes thin foundation, and the proper price therefor.

For one, I am not anxious to have foundation running so many feet to the pound provided the middle wall or base is thin, for if it has high side walls and the bees will thin it out, I think it will be a gain. But foundation 10 feet to the pound cannot be afforded for the same price as that running 6 feet to the pound, even if the base of each be exactly the same in thickness. The custom of charging 10 cents per pound extra for surplus foundation is well enough if that much difference is in the making, but when I am charged the same price for foundation running 7 feet to the pound with the wax mostly or altogether in the base, as is charged for 10 foot foundation, I feel that I am not getting the best end of the bargain. If any uniformity can be established, it will be a blessing.

Marengo, Ill.

For the American Bee Journal.

Section Honey Boxes.

A. D. STOCKING.

Mr. E. A. Thomas, in the BEE JOURNAL for January 25th, objects to the one-piece sections, although my experience with sections has been limited, I think the one-piece section the strongest and quickest put together, and it certainly is the neatest; it will stand more jarring and careless handling without cracking the combs than either the dovetailed or nailed section. I have never seen any dovetailed sections that would not get loose in the joint after being put together, standing awhile and getting dry, and the least jar racks them out of shape. Propolis will not hold them when it is cold, they require the joints to be dipped in glue to be safe. This is my experience with dovetailed sections.

As to breaking in putting the one-piece section together, if they are made from good stuff there need not be one in a hundred broken; take a sponge dipped in water and draw across the joints and pack them close for a short time, and they will bend nicely, and if a small paint brush be dipped in hot glue and drawn across the joints, they will be perfectly secure. It will take but a few minutes' practice to get the knack of putting them together so that they can be done (even with the gluing) faster than the dove-tail can be put together. I have no interest in the manufacture or sale of any section.

Ligonier, Ind.

For the American Bee Journal.

The Theory of Parthenogenesis.

DR. WM. R. HOWARD.

As *puer Americana* has "dissected" my article in the AMERICAN BEE JOURNAL, vol. 17, page 290, and not tried to compare the parts, or advance any arguments to disprove them, I will simply answer his questions, while I examine his assertions. In BEE JOURNAL, vol. 18, page 42, he says:

"I also deny (with Mr. Robinson) that parthenogenesis is a fact proven in nature." I will call his attention to the last paragraph in the article above referred to, in which I said: "Now, since parthenogenesis or agamic reproduction is the production of living individuals, without the actual congress of the sexes, he is compelled to admit the production of drones by parthenogenesis." Now mark, it is a well known fact, that virgin queens and "fertile workers" do lay eggs which produce living individuals, and no one has ever shown that these workers had been fecundated by meeting the drones. Again, he says: "All admit that the queen bee is not bisexual, therefore all her eggs must be fertilized by the spermatozoa of the male to produce fruitfulness." If the queen bee is not bisexual then she must be asexual, or a hermaphrodite, so called. If she is not a bisexual insect what is the use of congress of the sexes? I stated that "fertilization of the female germ by means of the male sperm, through the congress of sexes, is the rule with bisexual animals, but there are exceptions among insects." He says: "asexual, i.e. without sex is not a law in nature." I plainly defined the meaning of the term as I used it, and there certainly was no cause for his misconstruing it, viz: "The individuals in whom this budding process takes place are called 'asexual,' because, though they may resemble the female sex outwardly, their sexual organs are only partially developed."

He denies the budding process altogether. I ask him to explain the reproduction of the *aphis*, taking Huxley's 8 conclusions for his text. He says that "asexual" and "agamic" are confined to "botanology" alone, or "applied only to vegetable life;" if so, why are these terms so often employed by the best authorities in connection with animal life. He quotes as if from my article, "eggs that you wish to hatch must be left to the care of the bees." I have read the article over and over, and have overlooked it, or it is not there. I find no such language; though it is a truthful assertion, there was no point under consideration that demanded its immediate presence.

Again he says that "neuter cannot be applied to workers, for they are undeveloped females." Neuter was formerly applied to those hymenopterous insects having females of dimorphic forms, in order to distinguish the sexual form, or those which produced true eggs, and capable of sexual semen and fecundation, from the "asexual"

form (neuter or worker ants and bees), some of which have been known to produce young without the interposition of the male.

In conclusion, I will say that, in the above, I have merely called attention to the "dissected" article to prove the points he refers to, and had he carefully read it, and thoroughly understood it, he would have been spared the pains of even referring to it, unless he could have advanced some arguments to disprove the points mentioned, or have given some evidence to establish his own assertions. Mere assertions, without any attempt toward proof, are puerile in the main. At "that well where truth lies hidden," we all hope to meet—*puer Americana*.

Kingston, Tex., Feb. 10, 1882.

For the American Bee Journal.

Wired Comb Foundation.

E. T. FLANAGAN.

The great advantage wired frames possess over the unwired is so obvious, that it is strange that the practice of wiring all frames used in the brood chamber, and for extracted honey, is not more generally practiced. I know that in many quarters there yet exists a prejudice against wired foundation and wired frames, but when the work is properly done, and a fair trial given, all prejudice vanishes. The great difficulty at first was to get wire, or rather use wire, small enough to be fully imbedded in the septum, and yet strong enough to resist considerable pressure, and, at the same time, free from corrosion or rust. After many trials, this was accomplished by the use of tinned wire (No. 30 being the best size). Yet, even with the advantage of proper wire success did not always follow, owing to the inaccurate manner the wire was placed in the frames.

When made by steam power, the holes in the frames are pierced before the bars are ripped out, and when done properly, are as correct as could be desired; but the majority of beekeepers make their own frames, and, consequently, the holes have to be made by hand, and it is almost an impossibility to do it correctly in that way; besides the labor and fatigue, the time taken to pierce, say, 6 holes in each bar, or 12 to a frame, is very great. After having pierced and wired a large number of frames, and finding the work not so accurate as I desired, I obtained from F. B. Chapman, of Scipioville, N. Y. (by the way a successful bee man), a little machine, worked by hand, that he calls a "bar piercer," and I must say that after my experience in making the holes by hand, that I would not be without this machine for double its cost, could I not get another. It is simple, accurate, easily worked, and quite rapid in execution. I pierced over 600 bars in an hour, and done much better work than was possible by hand. It can be arranged to pierce as many holes as are desired at one operation or stroke of the lever or handle. Any one pos-

sessing ordinary mechanical skill can make one, and Mr. Chapman deserves the good will of all who need such a machine, for generously giving it to the public.

Belleville, Ill., Feb. 1, 1882.

For the American Bee Journal.

Wooden Separators for Sections.

C. R. ISHAM.

MR. EDITOR: In your comments on my remark that "the apiarists in this part of New York, in the future, would use wood separators in the place of tin for surplus sections," you say that, so far as your observation is concerned, their use had not been a success, and you should await with interest reports from those using them the coming season.

My greatest success in apiculture has been in getting comb honey for the city market, and dates back to the time I became a subscriber to the BEE JOURNAL, then edited and published in Washington by the lamented Samuel Wagner.

I persisted in producing comb honey when Mr. A. I. Root was proclaiming in *Gleanings*, that, with him, honey boxes were things of the past, but who afterward perfected machines for rolling out foundation which created a revolution in the profitable production of box honey.

My first experience with separators was in using thin, perforated boards. I afterward used glass boxes with tin corners, until a fire in June, 1879, destroyed my buildings and most of my machinery for manufacturing them. With honey harvest at hand I adopted the speediest method to secure surplus going to waste, necessity compelling me to use separators at an expense of some \$40 or \$50 for tin; but just as soon as I could get my machinery to work, I commenced replacing the tins with wood, and to-day could not be induced to use tin for new racks or frames, if it was furnished to me free of cost!

The facility in changing the size of our sections to meet the demands of trade is of no small consideration, as it enables us to do so at comparatively little expense. The one fact of its giving a wider entrance, saying nothing about warmth or cheapness, is enough to commend their use to every thinking, practical apiarist, who is engaged in producing honey for profit.

When I see my views so strongly confirmed by such successful honey producers as Messrs. Newman & Son, of Peoria; Messrs. Van Eaton & Rians, of York; Stanley & Bro., of Wyoming, and the Messrs. Benedicts, of Perry, who, for the past several years, have been producing box honey by ear loads, I feel that my position is practicable, and that time and experience will confirm, as a grand reality, that which you now look upon as a doubtful success.

We took an advanced position in advocating and using foundation for surplus honey, when it was condemned by Messrs. Doolittle, Betsinger and others at the Northeastern Conven-

tion; also at the National Convention held in New York, when Messrs T. G. Newman and A. J. King complained so sadly; the first named, about the "fish bone" in the center of the comb, and the latter commented so severely upon a case of honey he had received from Mr. A. I. Root, in which foundation had been used full size for starters.

The next fall Mr. King, in the *Bee Keeper's Magazine*, spoke of a car load of honey shipped to New York by Messrs. Newman & Son, of Peoria, N. Y., and myself, as it stood piled up on the sidewalk in front of Messrs. Thurber's store, as being the handsomest lot of honey ever brought to New York, yet this same pile of honey owed its fine appearance to having been built upon wax foundation whose use for surplus he had severely condemned only the fall before.

It was some of this lot of honey which found its way to the Queen's table, giving it a place in the menu of the titled aristocracy of Great Britain, thereby helping to open up a foreign market for the surplus product of our apiaries.

Thin wax foundation properly made, in the language of one of New York's foremost apiarists, is a "grand success," and I believe wooden separators are destined to supply the great desideratum for the cheap production of surplus honey.

Peoria, N. Y.

[Mr. Isham is a practical and progressive apiarist, and we hope that another year's experience with wooden separators will fully equal his expectations. We object to nothing that is progressive and practical, but must say that this needs some further demonstration.—ED.]

For the American Bee Journal.

A Plan for Wintering Bees.

J. E.

One of the desiderata in the successful wintering of bees, is pure honey, and the absence of pollen in the brood nest. An excess of pollen in the combs will lead to brood-rearing, during a warm spell in winter. This is an abnormal state, and, if followed by protracted cold weather, will result in dysentery.

To obviate this difficulty, I propose the following plan: Put away nice worker combs, well filled and sealed, containing pure honey gathered early in the season, as this will be found to contain the least pollen, in number equal to two combs for each colony. Then, after brood-rearing has ceased in the fall, go round to each colony; lift out all the combs, shaking the bees back into the hive, and place two of these reserved combs of honey, 1½ inches apart, in the center of the hive; place a division board on the outside of the combs, packing the outside empty spaces with some absorbing material; cover with a quilt and chaff cushion in top story, and leave them until pollen begins to come in freely

in the spring; then place an empty worker comb in the central open space; the queen will quickly fill it with brood, when one of the division boards may be moved back and another empty comb inserted in the brood-nest.

This operation may be repeated every 10 or 12 days, according to the weather and amount of the honey flow, until the hive is filled with combs.

The advantages claimed for this method of wintering, are that the bees are packed up snug and warm, the open space in center giving them opportunity to cluster together in a compact mass, thus enabling them to keep up a proper temperature, and prevent loss by small bodies of bees being caught between the outside combs during a cold spell. Also brood-rearing can be regulated in the spring, according to the judgment of the bee-keeper, as they will rear no brood of any consequence during an absence of pollen in the hive; and every bee-keeper knows that too early rearing of brood is detrimental to the welfare of the colony.

Gainsville, Ky.

For the American Bee Journal.

Location is an Important Matter.

J. A. BUCHANAN.

No doubt the kind of hive used, and skill in management, has much to do in making the pursuit of apiculture a success, but location plays the most important part. Perhaps one-half or more of the bee-keepers of the country have a location where nearly the entire crop of surplus honey is secured from white clover, and but little from other sources during the season. Now, as we can here only count on from 3 to 6 weeks' yield from clover bloom, it may be easily seen that ordinarily, not very large quantities of surplus can be obtained. And, indeed, taking into account the number of seasons clover bloom fails to secrete honey, save in limited quantities, it may be questioned whether in such localities, bee-keeping, as a specialty, can be made to pay? Where even fair yields of surplus are secured from apiaries so situated, much more credit should be given to the apiarist than to those favored with a location giving them a second opportunity to secure surplus from fall flowers.

The seasons following long, cold winters, bees are usually left in a weak condition, and do not become strong in numbers, and of proper age to take the field and secure the full benefits of this short yield, and the chances are that many will only get there in time to find the season ended, and no surplus secured. Bee-keepers so located as to be favored with both an early and a late bloom, in such abundance as to give good yields of surplus, have more than a double advantage, and for such, with almost any kind of hive, it would indicate a poor knowledge of the business, if reports of large yields of surplus honey could not be shown. There would be

for the fall yield, or for any yield after clover bloom, bees in such great abundance, and of the proper age, together with the favorable weather usual for that season of the year, to give the most satisfactory results.

Since the same form of hive and management will not give in all localities similar results, I am by the nature of the subject led to briefly consider the question of the hives best adapted to location. Why is it that there is such a diversity of opinion as to the best form of hive or depth of frame. I claim that location and time when bees store winter supplies, has much to do in bringing about these conflicting opinions.

Take a locality where the honey supply for winter is stored during the blooming season for white clover (June and the early part of July), when the season for storing is ended, and the hive well supplied, the honey, if in shallow frames, will be in good condition for the bees to winter well, but by the approach of cold weather, if no fall honey is to be had, it is found that the honey in the center combs is nearly all consumed, and the colony in poor condition to pass safely through a cold winter.

In this case we have a helpless condition of things, unless means are provided for a safe and ready passage for the bees over the frames to the stores in the outside combs; but this timely precaution is not always attended to, and here follows heavy losses, and a vehement condemnation of the shallow frame. But if the honey had been stored in the fall, the same as before described, and not being much drawn on for the support of the colony before winter, there would be no complaints about the shallow frame. I think this a reasonable explanation, founded on facts, which makes plain why such great differences of existing opinions as to best form of hive to adopt. "What is one's meat is another's poison." That form of hive most successful in our locality may be a failure in another. Hence to draw the inference that deep frames with large storing room in the breeding apartment, for localities where stores for the whole season are gathered during the early bloom, and shallow frames and smaller breeding apartment, if supplies are gathered during both early and later in the season. Taking this as a correct view of the matter, there is no necessity for so much controversy as to the best hive or best manner of manipulation.

Experiment a little and ascertain the kind of hive and management best suited to each peculiar location.

Holliday's Cove, W. Va.

It would save us much trouble, if all would be particular to give their post office address and name, when writing to this office. We have letters (some inclosing money) that have no name, post-office, County or State.—Also, if you live near one postoffice and get your mail at another, be sure to give the address we have on our list.

SELECTIONS FROM OUR LETTER BOX

Much Honey Consumed.—I put 33 colonies of bees into the cellar about the 10th of December, most of them well supplied with honey, and in good condition. To-day I set them out, and I never saw them fly livelier in June, than they did from 10 until 3 o'clock. All in good condition except one late swarm, which had starved. Had I better return them to the cellar, or will they do as well out, if the weather continues moderate. They have consumed nearly double the honey, already, that they did all last winter, put away in the same room, and prepared in the same manner. Can you give a reason for it? I like the make-up of the BEE JOURNAL this year much better than last, and consider it A No. 1. REUBEN HAVENS.

Chebanse, Ill., Feb. 8, 1882.

[Leave them out, unless the weather becomes extremely cold. With the probability of frequent flights from now until spring, they will suffer no harm. The excessive consumption of honey was owing to high temperature in the cellar, and the uneasiness caused thereby. We presume you will find more or less breeding has taken place, while last winter there was none.—Ed.]

Bacterium.—I thought bacterium was gone and pollen had taken its place; but as it appears to be returning, a few words concerning it may not be amiss. Bacterium, or the plural bacteria, which is most commonly used, are minute forms of vegetable organism. They are found in the sap of trees and vegetables, in the fluids of all animals, and abundantly in decaying substance. They are so minute that they float in the air unnoticed. They appear to be the root or starting point of fermentation or decomposition. They have no effect on any part as long as vitality remains. To illustrate: If a growing apple receives a scratch on it, not enough to stop its growing, the scratch will heal over and become sound; but if the apple is fully ripe, bacteria get in and fermentation, rotting and decomposition is the result. Again, bacteria do not work much below temperate, and not at all below freezing. They work better the hotter it is, until it gets hot enough to destroy vegetable life. Let us compare this with bee dysentery. Bees are most apt to have the dysentery in long spells of severe, cold weather, when the bees are quiet and the hive at its lowest temperature—at a time when bacteria work but little if any. On the other hand, when it is warm and bacteria work the fastest, the bees (if they have enough to eat) are entirely free from dysentery. I write for the consideration of the considerate. E. B. SOUTHWICK.

Mendon, Mich.

Bees Wintering in First Rate Order.—I received the "Apiary Register," and it just fills the bill. Every bee-keeper should have one, if he has not more than 10 colonies of bees, for he can by it tell, at a glance, the condition of every colony of bees in his apiary, and know what changes are necessary, without looking over the hives. My bees, so far, are wintering finely, and to-day they had a fine flight. But very few bees have died; I think a tea-cup would hold all the dead bees out of 30 colonies. Twenty-seven are on summer stands, packed in chaff and straw, and 3 are in the cellar. I am very sorry to hear of the misfortune of H. A. Burch, of South Haven, Mich.; he furnished me with some of the finest queens it has ever been my lot to get. The queens were very large and prolific. The bees are long, leather-colored, very gentle, and great honey gatherers. His dealings with me were very satisfactory and just what he agreed to do. I wish I could say as much for one other dealer and breeder that I have had the misfortune to have dealings with, and have written letter after letter to him, and cannot even get an answer. What size will it be necessary to put holes into zinc for entrances to hives to prevent drones from flying.

L. DENSMORE.

Livonia, N. Y., Feb. 8, 1882.

[The holes or perforations in the zinc excluders are just $\frac{3}{8}$ of an inch. Some use them with round perforations, while others cut out strips $1\frac{1}{2}$ inches long by $\frac{3}{8}$ wide, and running horizontal with the entrance.—Ed.]

Better than Ever.—When I say that I like the AMERICAN BEE JOURNAL better than ever, and I may add, better than all others, I mean just what I say. The first and most important improvement was the change from Monthly to Weekly; the form of the Weekly I did not like, but made no complaint, because I knew you would change it whenever it became our and your own interest to do so—I was not mistaken. Your disposition to accommodate your patrons I very much admire. With the editorial commencing on the first page and the advertisements on the last pages, I think it is all we could desire. Permit me, however, to make a suggestion—if it would not interfere in making up the form—would it not be better to place the date at the top of each page, as in Vols. 9 and 17, it would certainly be a great convenience in reading. I hope soon, if time permits, to send you a communication on the "Improvement of the Italian bee." I have cultivated it with great care for more than 20 years, and differ with some of our writers concerning it.

WM. S. BARCLAY.

Beaver, Pa., Feb. 8, 1882.

[Thanks for the compliment. As to the running date on each page, we discarded it on account of its troublesome-ness. We shall be pleased to receive the communication.—Ed.]

Tin Numbers for Hives.—I would suggest now that you get up a tin tag 3 or 4 inches square with the serial on them, to go with the Apiary Register. The numbers could be stenciled on or could be printed with gum stamps. The figures should be large enough to be plainly seen for some distance. In this case, if the queen is changed from one hive to another, the tag can be taken off and go with her, and no alteration would have to be made in the Register. JOHN C. PEDEN.

Lawrenceburg, Ky., Feb. 9, 1882.

[The numbers could be put on very readily with a stencil-plate. We fear the tin tags would be too expensive, and too easily lost.—Ed.]

Doing Nicely.—My 57 colonies are wintering nicely. I looked through them on the 6th, and found all alive, strong, and active, with plenty of stores with ordinary weather to take them through all right. We have had an exceedingly wet, changeable winter. I use A. G. Hill's winter hive on summer stands, without protection, with wire screen under the center of the bottom board. This is the winter for this mode of wintering, and has been a grand success. I have lost but two weak colonies in four years. The past season, on account of excessive drouth, was a poor one for honey with us. The early spring opened up finely, and late fall closed out nice. ASBURY MCKNIGHT.

Bible Grove, Ill., Feb. 1882.

N. E. Wisconsin Convention.—In the BEE JOURNAL of Feb. 1, 1882, page 67, under the heading "Another reform needed," reference is made to the N. E. Wisconsin Bee-Keepers' Convention advertised to be held in Berlin, Wis., Jan. 17th and 18th, that was not held there and then. It is due those who were disappointed about that meeting that some explanation be made. The Secretary of the N. E. Wis. Association was unavoidably absent from the meeting at Pewaukee, in October, 1881, and it appears from her statement that last winter it was decided to hold but one meeting a year and that in October, which was known to but few that were at Pewaukee, and overlooked by those present who did know when Berlin was fixed as the place and Jan. 17th and 18th, 1882, as the time of the next meeting, being about the time it was held last winter. I sent you a report of the Convention at Pewaukee for publication, from which you took a notice of the meeting to be held at Berlin, Jan. 17 and 18, which was all right had the meeting gone on, and perhaps all right, any way. But after that report was sent, the Secretary wrote me, suggesting that the meeting be held the latter part of March, and requesting me to notify those at the Pewaukee meeting of the change, some of whom were notified, but no notice of this change was sent to the BEE JOURNAL, because the Secretary, after notification that a change would be agreeable, had not time to notify you before Jan. 17th. I failed, through the pressure of

other engagements, to give the Secretary the necessary information in time to have the matter set right, which I regret very much. The N. E. Wisconsin Convention will yet meet at Berlin, when it does meet again, and will probably do as well for the friends of the Association to make amends for this disappointment, as they did for the friends in the vicinity of Pewaukee at the meeting there.

T. E. TURNER.

Sussex, Wis., Feb. 10, 1882.

The Lewis Section.—1. Has any one tried to use the Lewis improved one-piece section? 2. Is it really an improvement? 3. How do the bees get into the sections without a side inset? Please answer through the BEE JOURNAL.

W. S. BUCHANAN.

[Having had no experience with the "Lewis improved one-piece section," we cannot say whether it is an improvement. Mr. Lewis' circular gives directions to use them in cases by spreading, allowing spaces between for the entrance of the bees. For use in the rack, they will, of course, require to be spread in the same manner, using wooden separators between them.—Ed.]

Irregular Combs.—To straighten irregular combs I have practiced the following plan: Warm the combs by placing them in the sun until they are soft and pliable, then lay them on a flat, smooth surface, as a hive cover, and another flat surface, as a piece of plank on them, to press them down level, and let them remain thus till cold. They are then ready to hang in the hive, nice, even, and straight as could be desired. This is my practice, and my hundreds of straight combs, without an irregular or crooked one, is the result. I never shave down, nor melt up good combs into wax.

S. D. MCLEAN.

Columbia, Tenn., Feb. 10, 1882.

An Excellent Report.—Last winter I only saved 5 colonies out of 41 prepared for winter the fall previous. These 5 were in very weak condition and I had but little hopes of any surplus from them. I obtained 2 colonies from my neighbors, making 7 to begin with. When the warm weather came they built up beyond my expectations, and gathered a small surplus from white clover; basswood lasted but a short time; red clover did well for the first time in a number of years, and buckwheat yielded sparingly. To sum up: I obtained 1,650 lbs. of extracted honey from my 7 colonies, spring count, averaging 205-7 lbs. per colony. I increased to 19, which are in the cellar with sugar syrup and no pollen. The honey which would have been required to winter them, is not included in the 1,650 lbs. After reading Mr. Heddon's articles, it set me thinking about my losses last winter. I found, by examination, that the colonies I fed the syrup to, had only such combs in the hive as I had used for

extracting, and had no pollen, while those that died, with natural stores, had large quantities of it. I think I never had bees winter so far with the loss of so few, as the present, but the worst time is yet to come, of course.

A. A. E. WILBER.

Moravia, N. Y., Feb. 6, 1882.

Will Air-tight Jars prevent Honey from Candying?—When extracting last August I filled a Muth two-pound glass jar and corked it. The rest of my honey I turned into a can. I drew off a portion of it into tumblers in the fall, and while the honey in these has candied solid, that in the jar remains as clear as when extracted, though it has stood in the light every day since. The honey remaining in the can is still liquid, though it shows signs of granulating. Will honey which is put in an air-tight jar immediately after extracting remain liquid? Or, how do you account for some of this honey candying, and some not? Please answer through the JOURNAL.

JAS. MCNEILL.

Hudson, N. Y., Feb. 9, 1882.

[We cannot account for it, except that it has remained where it did not become so thoroughly chilled as did that in the can. Perhaps the lack of evaporation had something to do with it. We have had many samples of extracted honey, which have candied in air-tight bottles; some, too, that was quite new when put up.—Ed.]

What Was It?—In May of last year 2 colonies of bees, in fair condition, were found to be idle and hanging listlessly around the entrances to the hives, while their neighbors were busily engaged in bringing in honey and pollen. An investigation revealed the fact that perhaps $\frac{1}{4}$ of their brood was dead and decayed in the cells—some of it unsealed and some sealed, but with perforations in the cappings. The bees could not, or would not, remove the sticky mass from the bottom of the cells, so I proceeded to do it for them with a bent pin, and I continued to do so for one of the colonies, at intervals, until they fully recovered and made a prosperous colony. With the other I adopted a more radical course, by removing all their combs and making them start a fresh lot of brood, which all proved to be healthy. What was it?

J. L. WOLFENDEN.

[It was brood which had become chilled, and the bees were disheartened and discouraged. Had it been foul brood there would have been a recurrence of it in the two hives, and would have extended to other colonies.—Ed.]

Bees in the Cellar doing Well.—I have 50 colonies in Langstroth hives in the cellar, doing finely. Last season was a very poor one for bees, in these parts, but little surplus honey was produced.

A. REYNOLDS.

Quaker Springs, N. Y., Feb. 6, 1882.

Climbers for Shade.—Can the BEE JOURNAL give the name of a good annual climber that will furnish shade for hives and pasture for bees? In view of the action of the N. E. Convention, I should be sorry to become famous for anything, in apiculture. If the National Association cannot honor every man, they had better not mention any, for fear some side affair will kick up a row about it. I have lost six colonies already. Direct cause, old bees; indirect cause, poor bee pasture.

WM. CAMM.

Murrayville, Ill., Feb. 11, 1882.

[We do not know what to recommend as the best annual climber for shade and bee pasture, too; but would try some of the better and more prolific varieties of cucumbers, thus realizing a shade, honey, and a profitable crop of cucumbers for market, which of itself would pay the cost of cultivation. In all attempts at planting for honey, we would advise a preference always to be given that which possesses a value aside from its honey yield—not that honey itself will be unremunerative, but because a double crop, and hence, a double profit, is more desirable than the single return. We are convinced the N. E. Convention will at some future time see the error of their way, in condemning so unmercifully the National Convention. A mild reproof will often carry stronger conviction than bitter denunciation.—Ed.]

All Right, So Far.—As long as I have one colony left and the BEE JOURNAL continues so far to excel all others, I shall take it. I put into winter quarters, the fall of 1880, 30 colonies, caps packed with rags, hives set under a shed boarded up tight on the west and north, and about 18 inches of straw packed between the wall and hives; came through with 20 colonies strong in honey, but weak in bees. They carried in pollen April 18th and built up rapidly from that time, but the drouth came just in time to find the hives crowded with young bees, which had nothing to do but consume what they had gathered from white clover. They swarmed but little, increased to 28 colonies, and went into winter quarters in the same manner that I packed last winter, and seem to be doing well so far.

G. W. PAGETT.

Oxford, Ind., Feb. 9, 1882.

Recipe for Making Paste.—Make a thin batter of best wheat flour, stir this into boiling water, on a slow fire; when cooked, or thick, take from over the fire, and to each quart stir in 2 ounces of New Orleans sugar or molasses, while hot. This paste will adhere as well to a non-porous surface as to a porous one. Keep in a cool place.

C. HAUCKE.

Greenup C. H., Ky., Feb. 6, 1882.

Bees have had Frequent Flights.—I have been making very close observations in reference to color of bees and their qualities for honey gathering, disposition in handling, hardiness, prolificness and beauty. My bees are of the lightest strains, with but few exceptions. I keep the darker ones in my Southern apiary; the light ones at home. I will give the results of my investigations to the readers of the BEE JOURNAL soon. Bees are wintering finely. I have 135 colonies in good condition, on the summer stands. The weather has been fine, with mercury above zero all the winter. The bees have had flights nearly every week. The prospect is good for the coming season. L. J. DIEHL.
Butler, Ind., Feb. 8, 1882.

Bees Doing Well.—I put about 40 colonies of bees in my cellar on Christmas day, and left 6 colonies on their summer stands. All are in fine condition. Those left out-of-doors have had frequent flights, and for the last 2 or 3 days have been carrying in pollen from soft maple. The weather is warm, being more like May than February. I. P. WILSON.
Burlington, Iowa, Feb. 15, 1882.

Prospects Brighter.—Last winter was so disastrous to my bees that I was ashamed to report my losses, after pronouncing my bees all right in March. My bees did so well last season, however, that I am getting reconciled. My honey crop averaged 150 lbs. for each colony that I saved from the wreck, and the increase by division was 200 per cent. Now, with a bee house built on the plan described by Mr. Greening, in No. 29 of last year's BEE JOURNAL, and better preparation of each colony last fall, I hope to report all my colonies fit for duty at next spring's roll-call. I have never had time to attend any of the Conventions, but promise myself in the near future the pleasure of taking yourself, Prof. Cook, and other bee-masters by the hand, and thank you all for much instructive and valuable information I have received by the perusal of your communications.

F. T. BOUTELLER.
Belle River, Ont., Feb. 9, 1882.

Cold.—Bees all right so far. They are getting a good fly to-day. An 18 inch snow fell on Saturday last which is melting rapidly. The coldest here this winter was on Jan. 24—2° above zero. The BEE JOURNAL comes regularly and is appreciated. Generally reaches me on Friday of each week. J. W. CARTER.
Pleasant Dale, W. Va., Feb. 8, 1882.

The Langstroth Hive.—I have tried four different patent hives for many years. The first was the Langstroth. They were all tried side by side with the Langstroth, and I found that the Langstroth was the best for all purposes, so I transferred all of my bees to this hive; therefore, I think that Mr. Heddon's advice is perfect, sound and provable. WM. ROBERTS.
Vaughansville, O., Feb. 14, 1882.

Wintering Well in Chaff.—I put into winter quarters 60 colonies, packed in chaff. All had a depth of 6 inches of chaff over the bees and inside of the cap. Previous to Jan. 26th they were not out for 5 weeks, but on that date they had a good flight. I discovered then that one had starved by clustering in one end of the hive and leaving plenty of honey in the other, that they could not get to, on account of the cold. On Feb. 6th the mercury ran up to 62° in the shade. Taking advantage of this, I opened every hive and found all in fine order; there was capped brood in a good many of the hives. We are having remarkably fine warm weather for this time of year. C. W. MCKOWN.
Gilson, Ill., Feb. 9, 1882.

Packed in Chaff.—Bees are wintering here finely. They enjoyed a good fly on the 6th inst., and one Dec. 18th. I have 146 colonies packed in chaff; all but 2 are in good condition. I am surprised at the reports of the extreme cold East. Seven degrees above zero is the coldest we have had. H. D. BURRELL.
Bangor, Mich., Feb. 10, 1882.

Spring-Like.—I send herewith some sprigs of smilax with bloom. My bees have had some grand and glorious flights the last few days. Some got into my plant house and gathered honey and pollen from smilax, etc. Robin red-breasts and blue birds greeted me this morning, the first time this season. The weather is like spring. What a difference between this and last season. H. S. HACKMAN.
Peru, Ill., Feb. 14, 1882.

Dairy versus Apiary.—I write to draw out from some source how much the apiary detracts from the dairy. It is well known, by observing dairymen, that beestake from their pastures some of the richest and choicest elements of their milk and butter, and the savory sweet and nourishing qualities from their beef and mutton, and their cows give, so to speak, skimmed milk when pastured near large apiaries. We have all noticed a vast difference in the savory elements of milk, butter, beef and mutton, and think the scientists will attribute a part to the depredations of the honey bee. I should like to hear through the BEE JOURNAL from some one versed in agriculture, as well as the apiary, about our bees depredating on the dairy. I have 50 colonies of bees in the cellar in good condition. I lost 8 colonies last winter out of 35, leaving 27 last spring, some very weak. I increased to 50, and took off about 500 lbs. of section honey, and called it a very poor year. Our bee pasture is mainly white clover; the quality of honey is good, and sells at 20 and 25 cts. per lb. I am well pleased with the present form of the BEE JOURNAL. When Jan. 1, 1882, came, I had 52 numbers (none lost), making a large book. ALVAH REYNOLDS.
Oneida, Ill., Feb. 6, 1882.

Bee-Keeping in Georgia.—Bees have had a flight nearly every day during winter, and there were but few days that they have not carried in pollen. In examining a few colonies on the 10th inst., I found all of them breeding finely, some of them with brood in 5 frames. Should they get no set back, they will swarm in March. Drones are nearly developed. The present size of the BEE JOURNAL I admire, and also the manner in which it is edited. I have not sent anything for publication in it lately, seeing that you had plenty that was much better, but please do not think I have forgotten the old AMERICAN BEE JOURNAL—long may it and its editor live. A. F. MOON.
Rome, Ga., Feb. 10, 1882.

Mild Winter.—The winter has been a remarkably mild one, and well calculated to bring bees through in good shape. My bees were carrying in pollen last Monday. H. H. LITTELL.
Louisville, Ky., Feb. 17, 1882.

Bee-Keeping in Utah.—Cache valley is about 100 miles north of Salt Lake City, some colder, and subject to early and late frosts; much healthier. We have not many bees here yet, but what we have are doing and paying well. We use the Kidder hive as yet. A colony of Italian bees in the Kidder hive will sell for about \$14; extracted honey about 25 cts. per lb. My report from the county was 70 pounds to the colony—a little over 6,000 pounds. I am satisfied if we had more experience and your modern improvements, we could do better. We will keep working at it till we get them. I guess you can appreciate the feelings of a young bee-keeper. Our bee pasturage is good—plenty of sweet, red and Lucerne clovers, and about 2,000 acres of willows. I winter on the summer stand, using stable manure and some sawdust, piling them beneath, at the sides, back and on top, and leaving the entrance clear. On the 1st of May they are ready for swarming. We generally increase two from one. Some years past we have been troubled with foul brood. The County Courts have appointed Commissioners to inspect and destroy foul brood wherever found, and they are doing a good work. The Courts impose a heavy fine on any one who refuses to destroy the infected hive. Though new, our county realized \$20,000 from honey alone.

GEORGE HIBBARD, Bee Com'r.
Logan, Utah, Jan. 22, 1882.

Young Bees.—To-day, Feb. 3, I looked over all of my bees, as it was warm, and they had a good flight. I found them in excellent condition, strong in bees, and several had commenced to rear brood; one having brood on two frames, and some were hatching out. Some had hatched. I have 28 colonies, all in chaff hives. I find a scarcity of pollen in all of my colonies. L. C. MCFATRIDGE, M. D.
Carroll, Ind., Feb. 3, 1882.

THE AMERICAN BEE JOURNAL

RATES FOR ADVERTISING.

20c. per agate line of space, each insertion.

A line of Agate type will contain about eight words; fourteen lines will occupy 1 inch of space. Special Notices, 50 cents per line.

DISCOUNTS will be given on advertisements for the Weekly as follows, if paid in advance:

For 4 weeks.....	10 per cent. discount.
" 8 ".....	20 " "
" 12 " (3 months)....	30 " "
" 16 " (6 months)....	40 " "
" 20 " (9 months)....	50 " "
" 24 " (1 year).....	60 " "

Discount, for 1 year, in the Monthly alone, 25 per cent., 6 months, 10 per cent.

Discount, for 1 year, in the Semi-Monthly alone, 40 per cent., 6 months, 20 per cent.

Advertisements withdrawn before the expiration of the contract, will be charged the full rate for the time the advertisement is inserted.

Transient Advertisements payable in advance. Yearly Contracts payable quarterly, in advance.

THOMAS G. NEWMAN,

974 West Madison Street., Chicago, Ill.

Special Notices.

To Advertisers.—By reference to our schedule of rates for advertising by the year, it will be seen that considerable reduction has been made. This, in connection with our large and increasing circulation, makes it advantageous to dealers to avail themselves of its weekly visits to the bee-keepers of America to make their announcements for the coming season's trade. We not only offer the best advertising medium, but the lowest rates on yearly contracts.

The Apiary Register devotes 2 pages to each colony, ruled and printed, and is so arranged that a single glance will give a complete history of the colony.

For 50 colonies (120 pages).....	\$1 00
" 100 colonies (220 pages).....	1 50
" 200 colonies (420 pages).....	2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones to procure at the start.

Articles for publication must be written on a separate piece of paper from items of business.

A Sample Copy of the Weekly BEE JOURNAL will be sent free to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

Honey as Food and Medicine.

We have just issued a new edition of our pamphlet bearing the above title. It has been revised and enlarged from 24 pages to 32, the new pages being devoted to new Recipes for Honey Medicines, as well as all kinds of cooking in which honey is used.

It is undeniable that pure honey is the simplest, the healthiest, the most natural, and the most strengthening article of food for healthy persons, as well as the best remedy for the sick; and for the convalescent it is the true balsam of life, to restore them to their wonted strength and health.

What is needed is to educate the community up to this idea, and in no way can that be done so well as by directing their attention to the merits of honey.

This little pamphlet should be scattered by thousands all over the country, by honey producers. In this way it will create a home market in almost any locality.

We have put the price of them low to encourage bee-keepers to scatter them far and wide. Single copy 6 cents, postpaid; per dozen, 50 cents; per hundred, \$4.00. On orders of 100 or more, we print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

When 100 or more copies are wanted, they will be sent by express, at the expense of the purchaser.

CLUBBING LIST FOR 1882.

We supply the Weekly American Bee Journal and any of the following periodicals, for 1882 at the prices quoted in the last column of figures. The first column gives the regular price of both All postage is prepaid by the publishers.

	Publishers' Price.	Club.
The Weekly Bee Journal.....	\$2 00..	2 75
and Gleanings in Bee-Culture (A. I. Root) 3 00..	2 75	2 60
Bee-Keepers' Magazine (A. J. King) 3 00..	2 60	2 35
Bee-Keepers' Instructor (W. Thomas) 2 50..	2 35	4 00
The 4 above-named papers.....	4 50..	2 80
Bee-Keepers' Exchange (Houk & Peet) 3 00..	2 80	2 35
Bee-Keepers' Guide (A. G. Hill) 2 50..	2 35	2 40
Kansas Bee-Keeper.....	2 00..	6 30..
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The Weekly Bee Journal one year and Prof. Cook's Manual (bound in cloth) 3 25..	3 00
Bees and Honey, (T. G. Newman) ..	2 40..
Binder for Weekly, 1881.....	2 85..
Binder for Weekly for 1882.....	2 75..

We are sometimes asked who our authorized agents are? Every subscriber is such an agent; we have no others, and greatly desire that each one would at least send in one new subscriber with his own renewal.

Binders for 1882.—We have had a lot of Emerson binders made especially for the BEE JOURNAL for 1882. They are lettered in gold on the back, and make a nice and convenient way to preserve the JOURNAL as fast as received. They will be sent post paid by mail for 75 cents.

O. H. Townsend has moved from Hubbardston to Kalamazoo, Mich.—the latter now being his address.

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When changing a postoffice address, mention the old as well as the new address.

When you have got an old horse that has passed the market period, apply a bottle of Kendall's Spavin Cure and the result will be marvelous. Read advertisement. 5w4t

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I am now booking orders for my GOLDEN ITALIANS, reared from the best stock in the country. Warranted Queens, \$1; Tested Queens, early in the season, \$2.50; after July, \$2; 2 frame Nucleus, with Tested Queen, \$4; Full Colony, with Tested Queen, \$10. The Best Quinby Smoker for \$1.50. Address all orders to L. J. DIEHL, (Money Order Office)—Butler, DeKalb Co., Ind. 8w6m

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Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., Feb. 20, 1882.

The following are the latest quotations for honey and beeswax received up to this hour:

Quotations of Cash Buyers.

CHICAGO.

HONEY—The market has an upward tendency, and I am now paying the following prices in cash: Light comb honey, in single comb sections, 17@21 cents; in larger boxes 2c. less. Extracted, 8@10c.

BEESWAX—Prime quality, 18@22c.

AL. H. NEWMAN, 972 W. Madison St.

CINCINNATI.

I pay 8@11c. for extracted honey on arrival, and 16@18c. for choice comb honey.

BEESWAX.—18@22c., on arrival. I have paid 25c. per lb. for choice lots. C. F. MUTH.

Quotations of Commission Merchants.

CHICAGO.

HONEY—Choice white comb, in 1 to 1½ lb. sections, 20@22c.; same in 2 to 3 lb. boxes, 17@20c.; dark and mixed, in 1 to 3 lb. boxes, 12½@15c. Extracted, white, 10@11c.; dark, 9c.

R. A. BURNETT, 165 South Water St.

NEW YORK.

HONEY—There is a liberal supply of honey here for which trade is very little demand, and prices rule weak and irregular.

We quote as follows: White comb, in small boxes, 18@19c.; dark, in small boxes, 12@14c. Extracted, white, 10@11c.; dark, 7@9c.

BEESWAX.—Prime quality, 21@23c.

THORN & CO., 11 and 13 Devoe avenue.

SAN FRANCISCO.

HONEY—Market is dull; not much offering, but there is an entire lack of inquiry at present.

We quote white comb, 16@20c.; dark to good, 10@14c. Extracted, choice to extra white, 8½@10c.; dark and candied, 7@9c. BEESWAX—23@25c.

STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY—Quiet and slow for all save choice bright comb—this sold readily; comb at 18@23c.; strained and extracted 9@11c. to 12½c.—top rates for choice bright in prime packages.

BEESWAX—Steady at 20@21c. for prime.

R. C. GREER & CO., 117 N. Main Street.

BOSTON.

HONEY—Trade quiet. We quote at 20@22c., according to quality.

BEESWAX—Prime quality, 25c.

CROCKER & BLAKE, 57 Chatham Street.

CLEVELAND.

HONEY—The market continues very steady; best white, in 1 and 2 lb. sections, sells quick on arrival at 21c@22c.; No. 2 at 19@20c., but buckwheat honey we find difficult to sell—holding it at 17c. Extracted, is in fair demand at 12c. in small packages, and 11c. in large packages.

BEESWAX—25c., and very scarce.

A. C. KENDEL, 115 Ontario Street.

Premiums.—Those who get up clubs for the Weekly BEE JOURNAL for 1882, will be entitled to the following premiums. Their own subscription may count in the club:

- For a Club of 2, a copy of "Bees and Honey."
 " " 3, an Emerson Binder for 1882.
 " " 4, an Apilary Register for 50 Colonies, or Cook's (Bee) Manual, paper.
 " " 5, " " cloth.
 " " 6, Weekly Bee Journal for 1 year, or Apilary Register for 200 Col's.

Or they may deduct 10 per cent in cash for their labor in getting up the club.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

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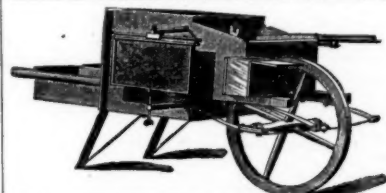
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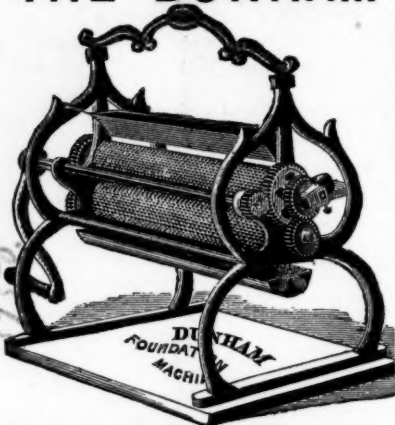
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